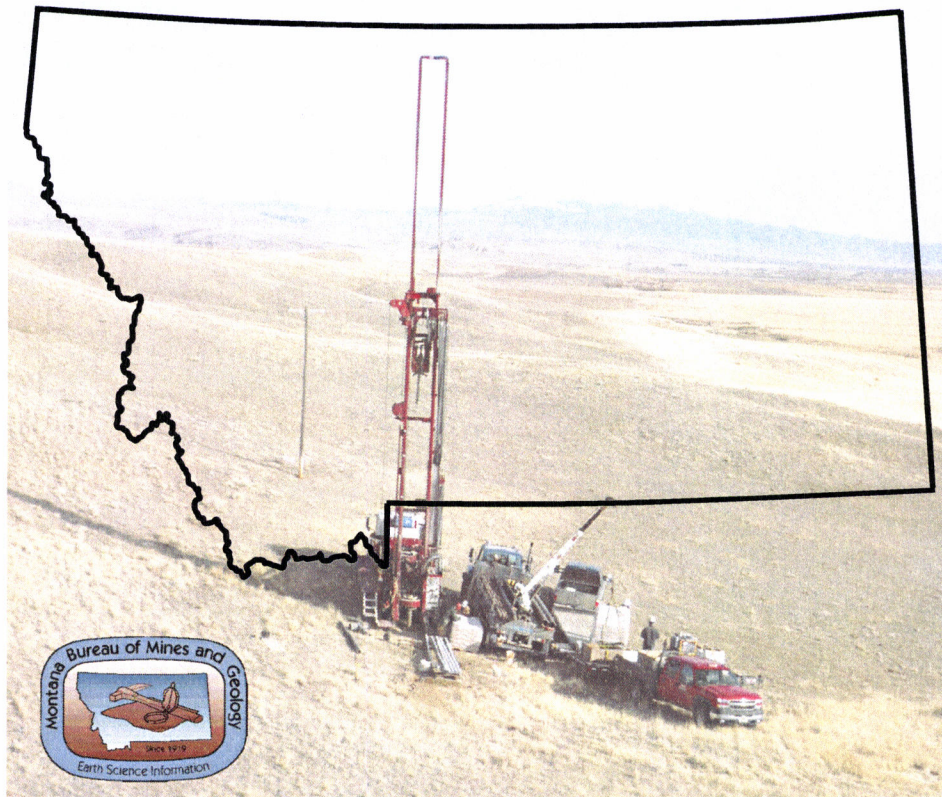


Ground-Water Investigation Program update



Presented to:
Water Policy Interim Committee
Helena May 11, 2010

John Wheaton
Montana Bureau of Mines and Geology

<http://www.mbmng.mtech.edu/gwip/gwip.asp>

Active Projects for the current biennium

North Hills (Helena)

Four Corners (Bozeman)

Belgrade - (Bozeman area)

Lower Beaverhead River west side (Dillon)

Scratchgravel Hills (Helena)

Bitterroot Valley – (Florence)

Flathead Valley Deep Aquifer (Kalispell)

Overview of Activities

Fully engaged in data collection at all project sites

Drilling, aquifer testing, monitoring wells and streams:
all continues

Modeling has been on hold, but now modelers are
preparing to move from field work to their computers.
They will guide the field work.

Activities Summary:

Contracts:

17 contracts have been initiated

Data analysis

Drilling: 9 contracts, about 50 holes now completed

Aquifer Testing: 2 multiple day tests are completed

Assistance : 2 contracts for local assistance,
such as Water Quality District

Consulting : 3 contracts with consulting companies

Bids out:

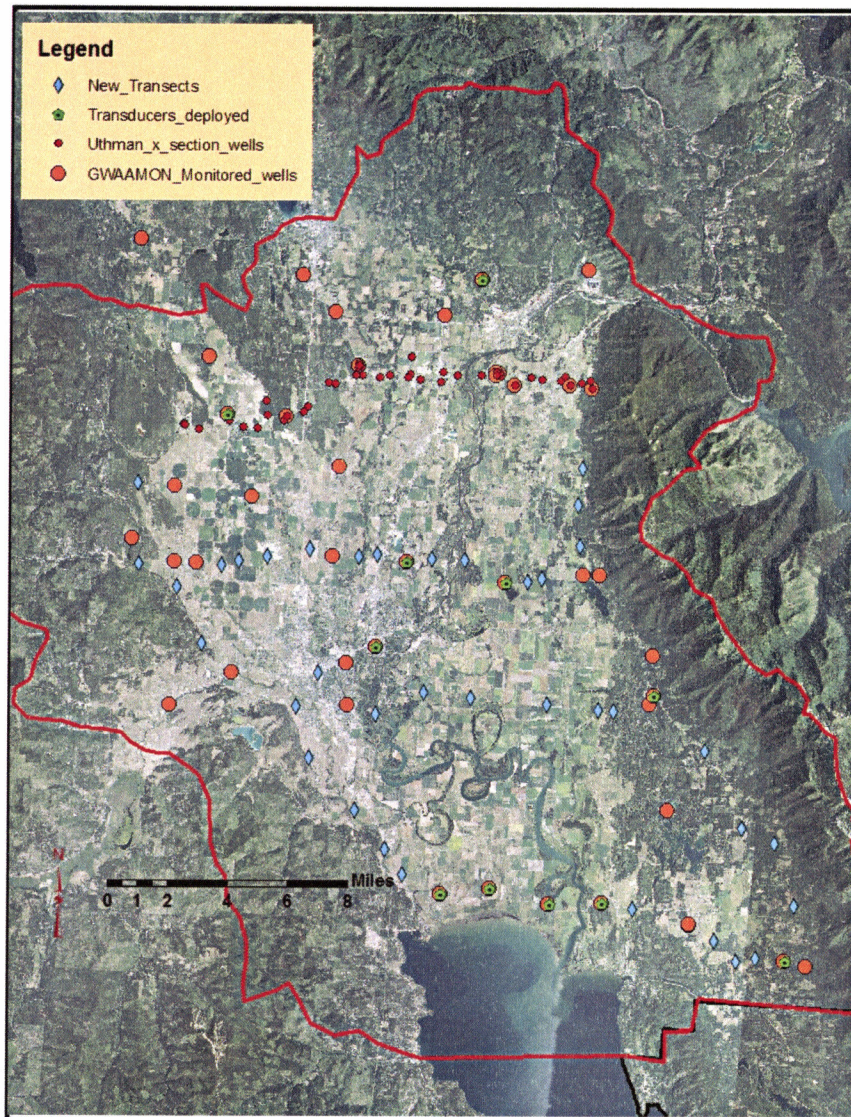
Drill : 5 bid packages are currently open

requisitions are on hold for various reasons

Monitoring networks:

Wells : 250

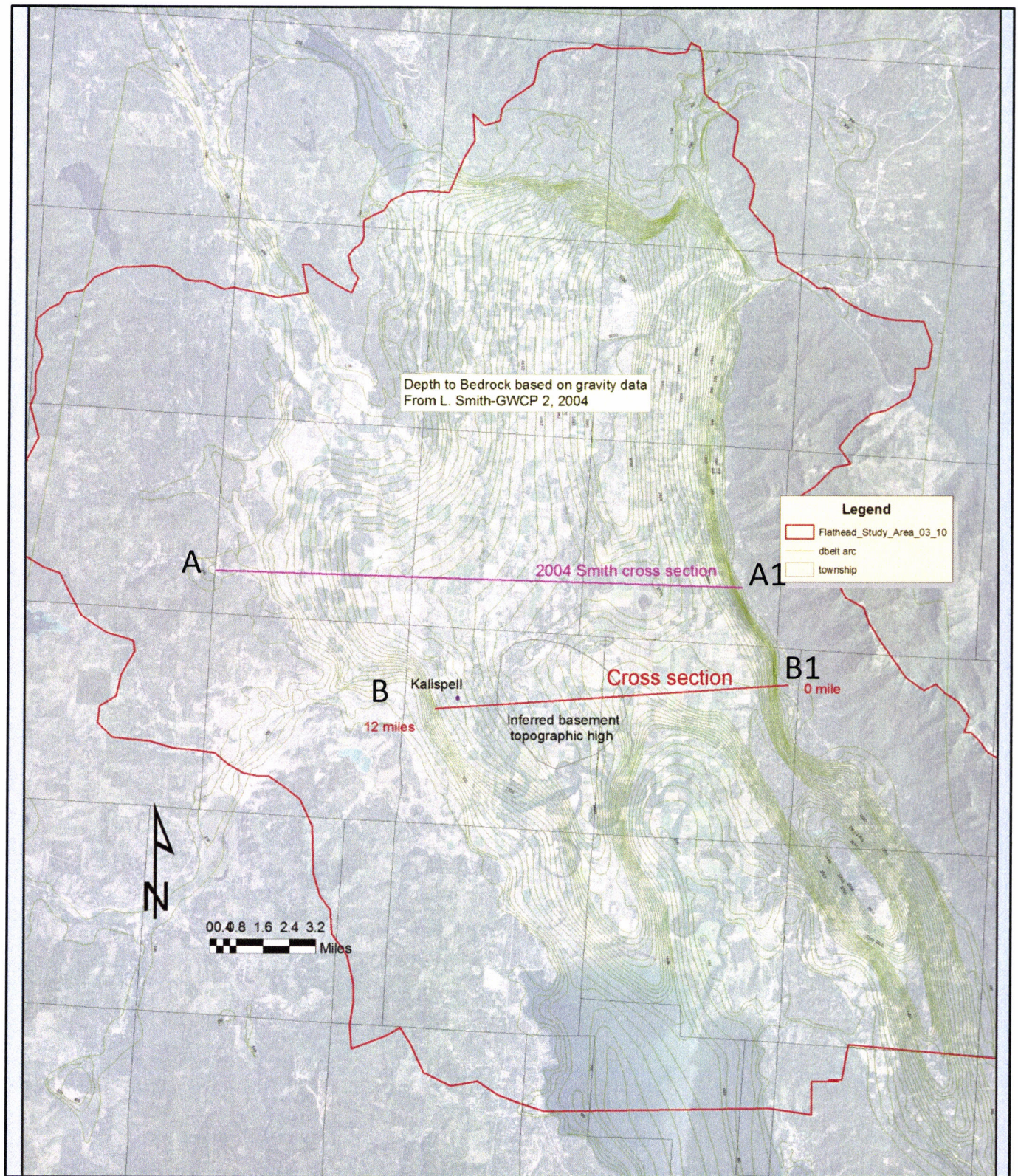
Stream sites : 36



Flathead Valley Deep Aquifer (Kalispell)

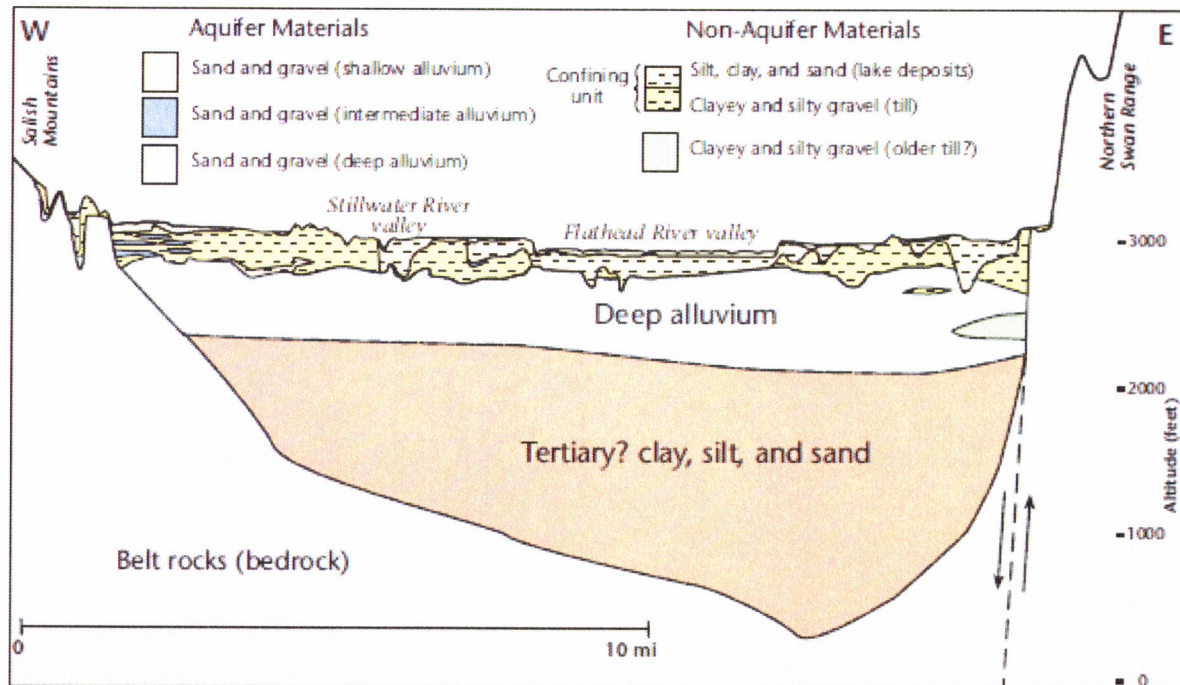
Includes a request to help evaluate
a spring in the PWS for Kalispell.
Surface water or groundwater?

Activities are focused on refining monitoring program
and goals in consideration of budget reductions.



A
a Kalispell valley

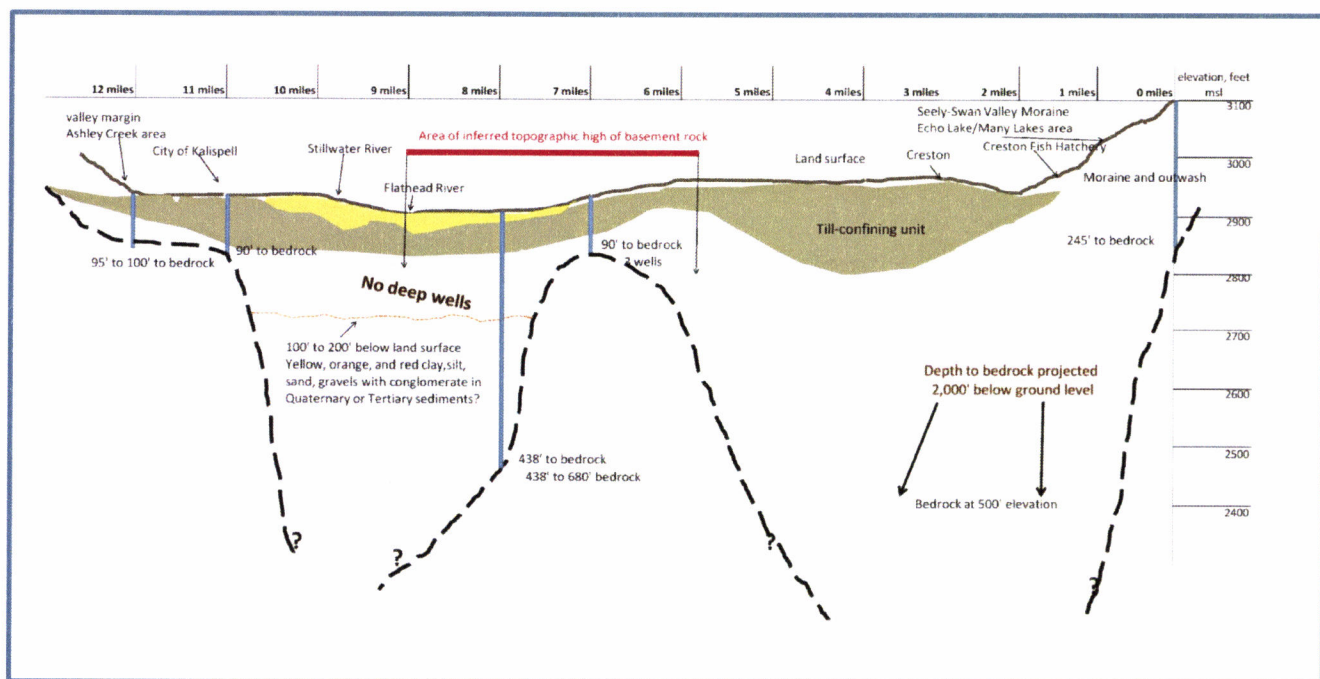
A1



A nearly valley-wide confining unit separates shallow and deep alluvial units in the Kalispell valley. The depth to bedrock varies considerably.

B

B1



Helena Area Projects

- North Hills
- Scratchgravel Hills

Team Leaders: Kirk Waren and Andy Bobst

Project includes coordination with other agencies and groups:

DNRC Water Resources Division

Lewis and Clark County Water Quality Protection District

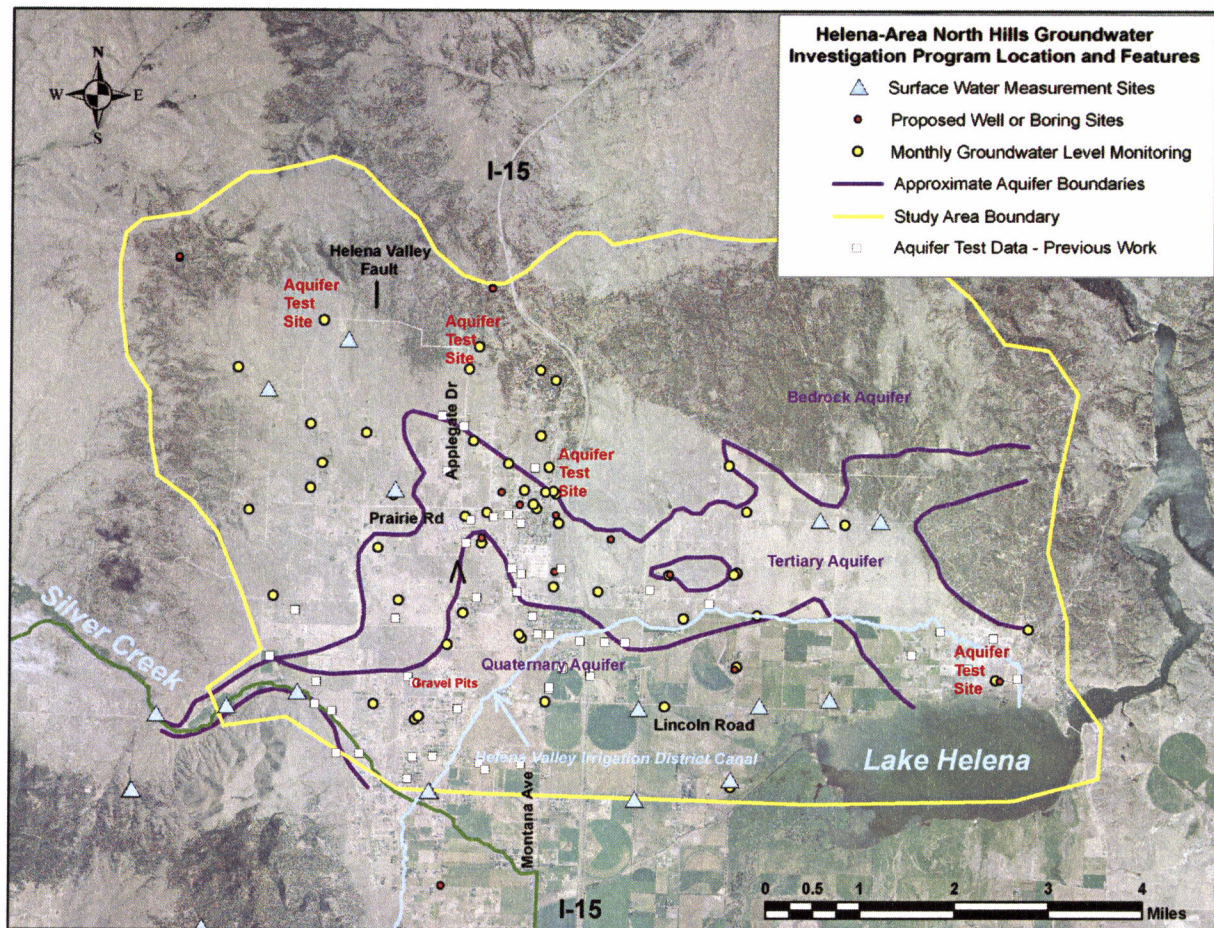
Lewis and Clark County Conservation District

Lake Helena Watershed Monitoring Committee

EPA

Montana Watershed Coordinating Council

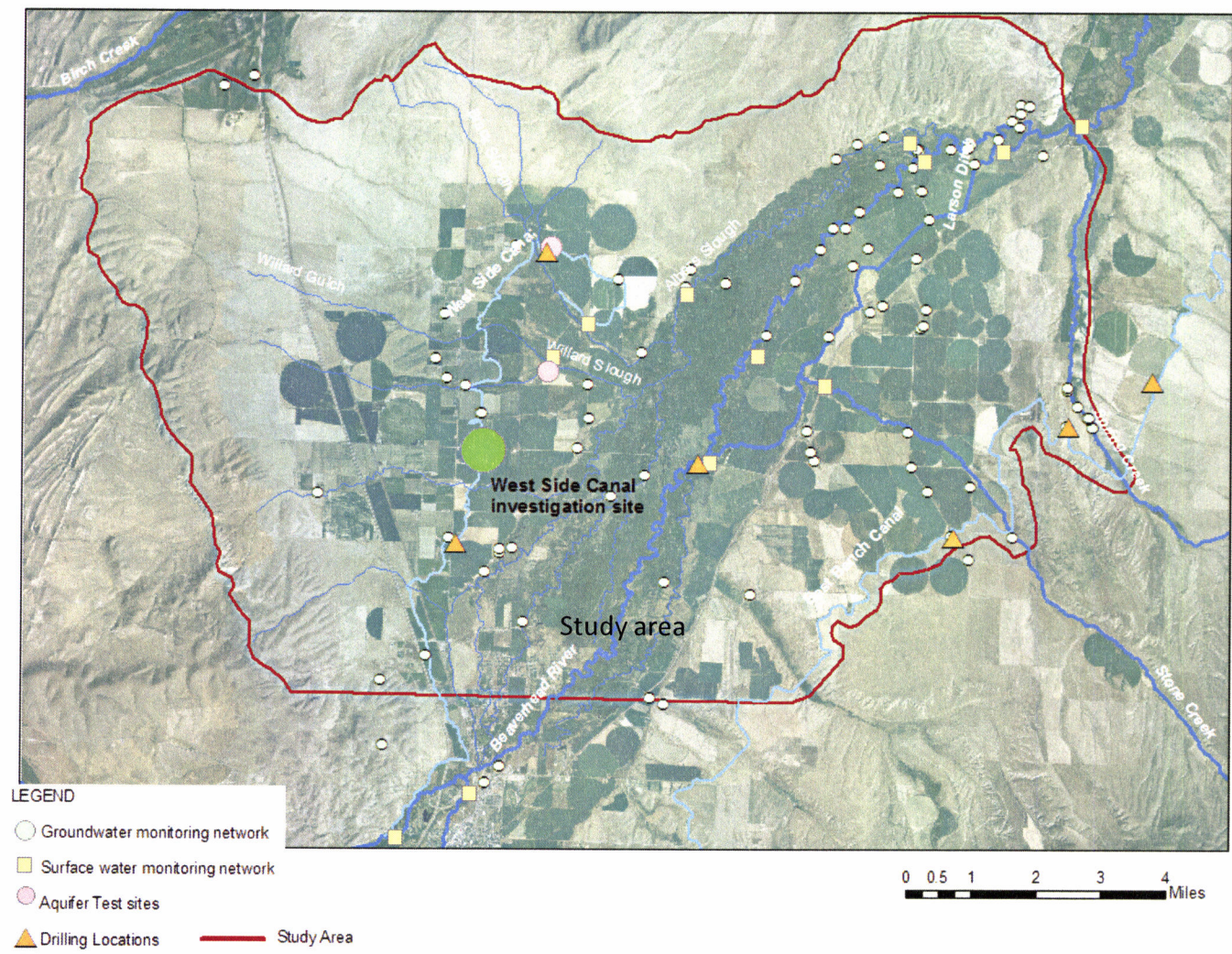
Department of Environmental Quality



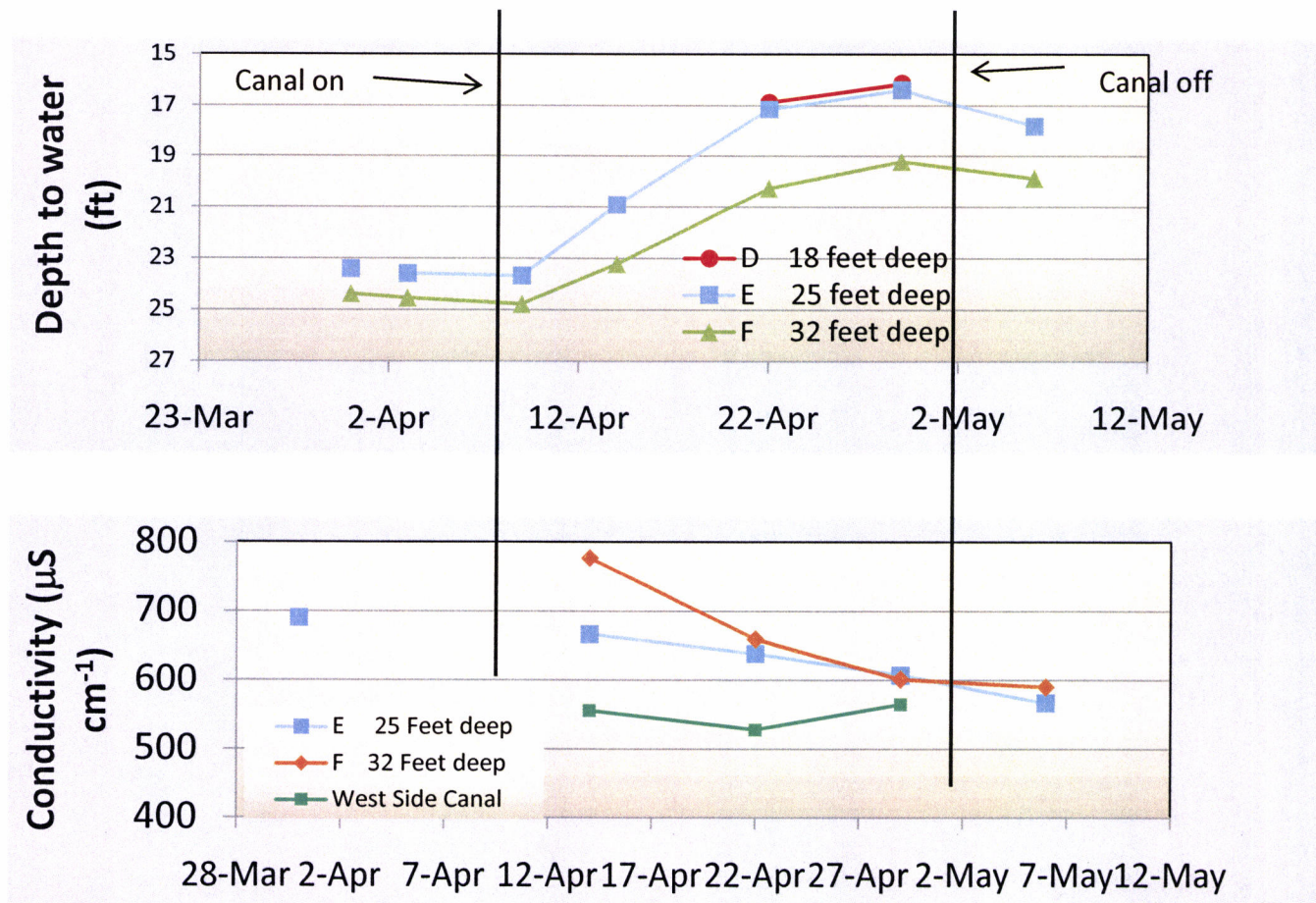
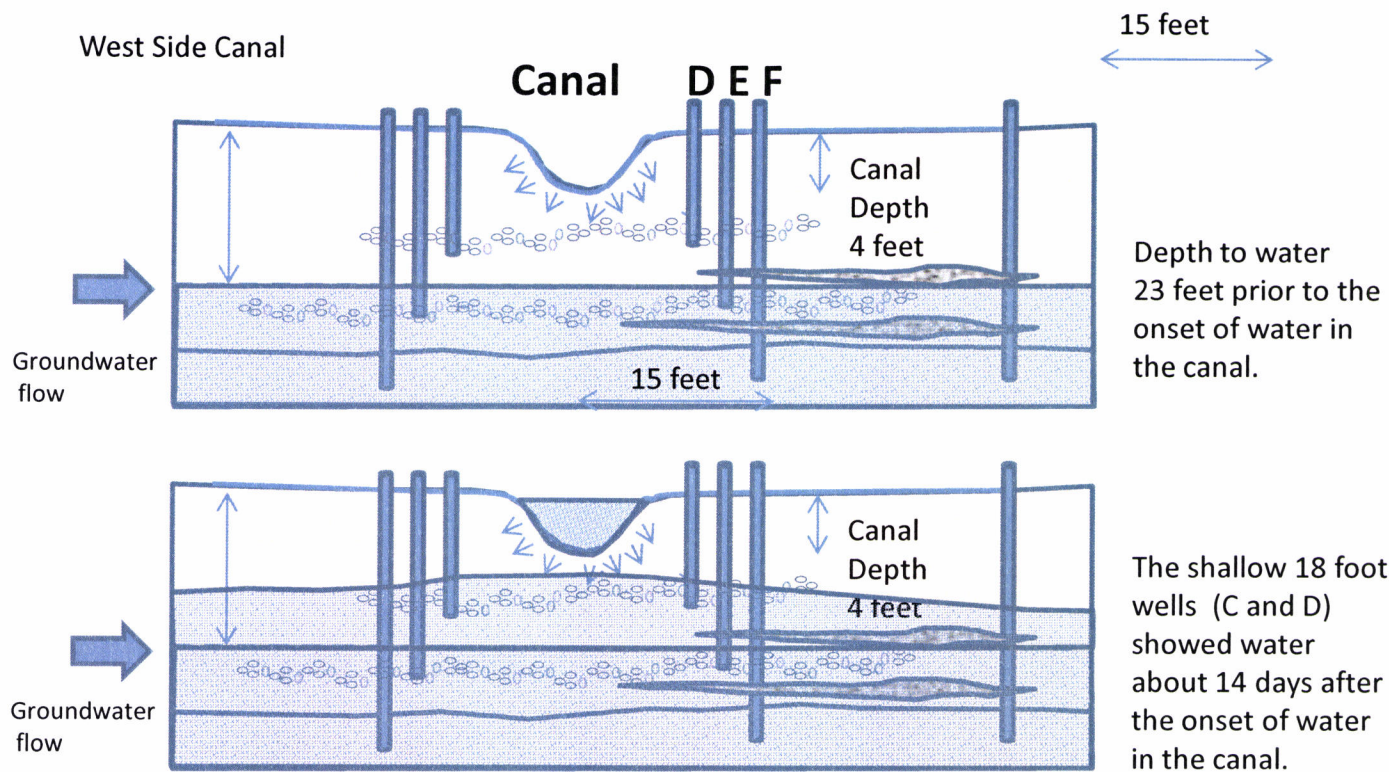
Aquifer tests for North Hills area:
Data compiled from about 60 tests
Highly variable

Lowest	5.4 ft ² /day
Panoramic Subdivision	6,142 ft ² /day
Highest	75,500 ft ² /day

Lower Beaverhead West near Dillon



Team Leader – Ginette Abdo

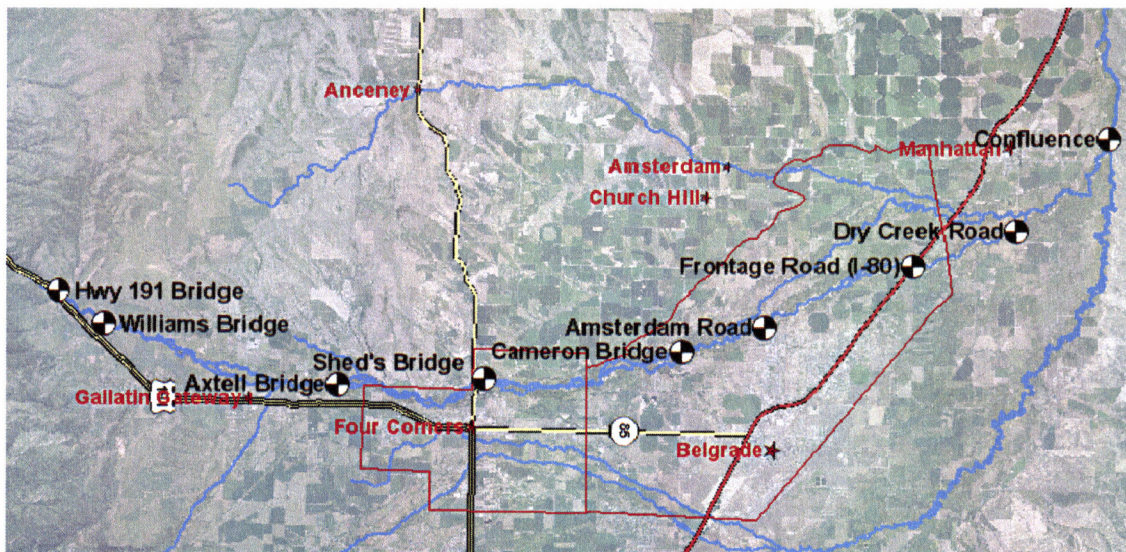
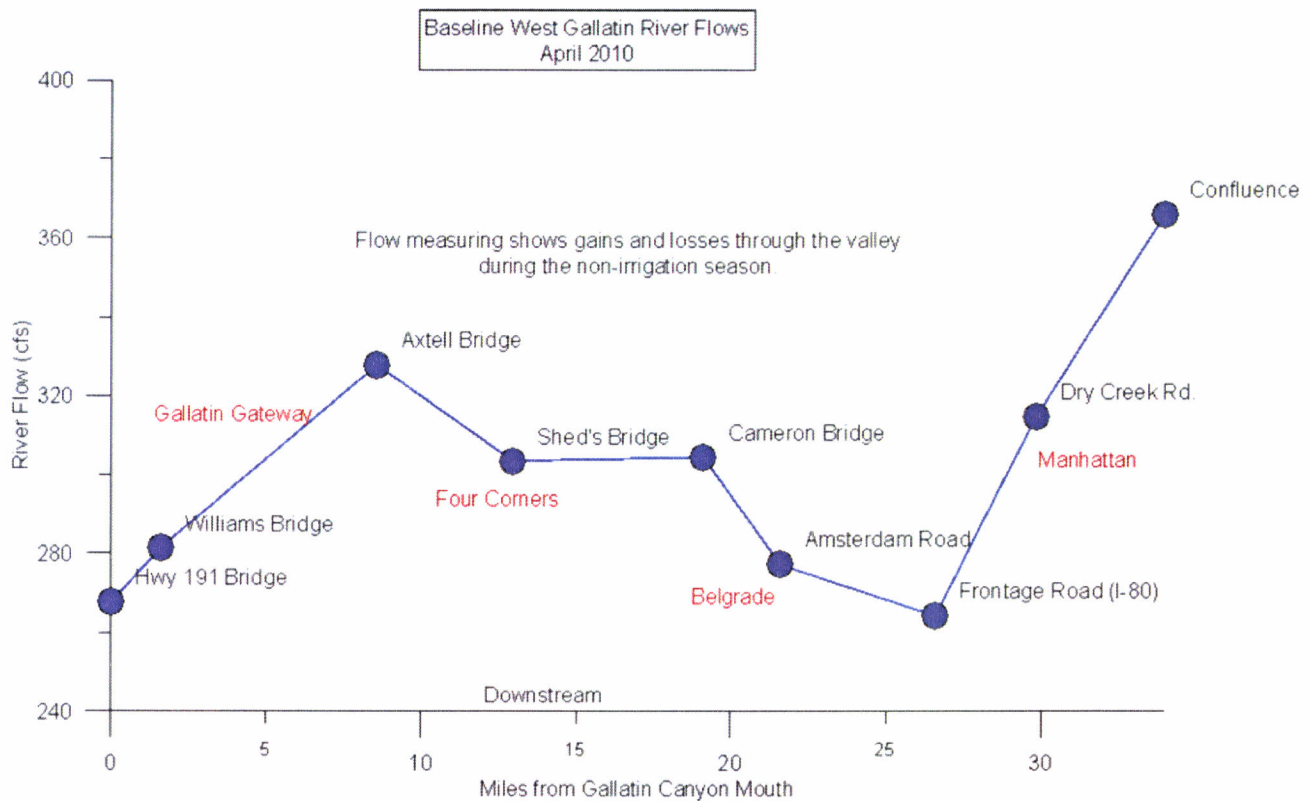


Gallatin Valley GWIP Projects



Belgrade and Four Corners Study Areas

Tom Michalek – Team Leader



23 Stream gauging stations
3 irrigation districts
60 wells are monitored

Projects for the next biennium:

Ground Water Assessment Steering Committee

Prioritizes GWIP projects

Have started the process for next biennium

Have set the goal of selecting next sites this fall (2010)